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(71) Applicant: CANON INC

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(72) Inventor: UNNO YASUYUKI

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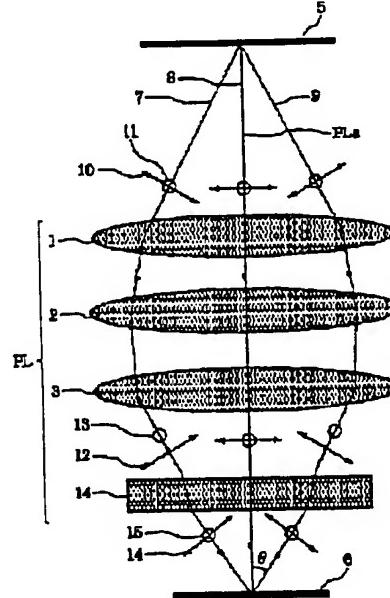
(54) PROJECTION OPTICAL SYSTEM AND  
PROJECTION ALIGNER USING THE SAME

(57) Abstract:

PROBLEM TO BE SOLVED: To highly precisely image-form a pattern by correcting birefringence having an optical element included in a projection optical system.

SOLUTION: In this projection optical system, a projection optical system PL having plural lens elements 1, 2, and 3 is provided with a birefringence correcting member made of one-axial crystal having a main axis in an optical axial direction and/or materials having distortion distribution equivalent to the one-axial crystal. Thus, birefringence generated by the plural lens elements 1, 2, and 3 can be canceled by the birefringence correcting member.

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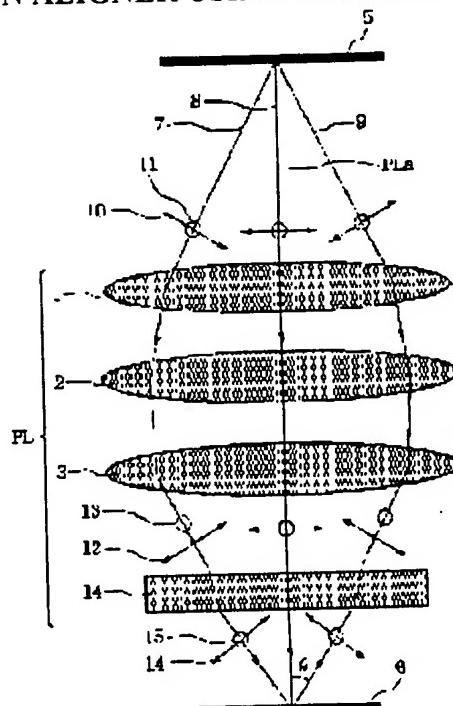
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